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PREPARATORY COMMITTEE FOR THE
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PREPARATIONS FOR THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT ON THE BASIS OF GENERAL ASSEMBLY RESOLUTION 44/228 AND TAKING INTO ACCOUNT OTHER RELEVANT GENERAL ASSEMBLY RESOLUTIONS: PREPARATIONS AT THE REGIONAL LEVEL

Action for a common future

Report of the Economic Commission for Europe on the Bergen Conference

(8-16 May 1990)

This report was prepared by the Economic Commission for Europe (ECE) after a meeting held in Bergen, Norway, from 8 to 16 May 1990. It is the contribution of the ECE region to the preparatory process for the United Nations Conference on Environment and Development and is submitted to the Preparatory Committee in accordance with General Assembly resolution 44/228.

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I. INTRODUCTION

1. This report is presented to the Preparatory Committee for the United Nations Conference on Environment and Development in response to resolution 44/228 adopted by the General Assembly in the autumn of 1989. The resolution recommends that the results of the regional conferences be "introduced into the preparatory process for the 1992 Conference, bearing in mind that regional conferences should make important substantive contributions to the Conference".

2. The Bergen Conference was a regional conference on the follow-up to the report of the World Commission on Environment and Development (WCED) in the 34 member States of the United Nations Economic Commission for Europe (ECE). The Conference was organized by the Norwegian Government in co-operation with the ECE.

3. As one of a series of regional conferences planned before 1992, this report on the preparations for and organization of the Bergen Conference and, in particular, the agreements reached on important principles and policy measures, should provide a useful input to the preparations for the 1992 United Nations Conference.

II. THE PREPARATIONS

(i) Mandate

4. The WCED report, which was launched in April 1987, calls for follow-up conferences on a national, regional and global level. This recommendation was repeated in resolution 42/187 adopted by the General Assembly in 1987. The resolution also stated, inter alia, that sustainable development "should become a central guiding principle of the United Nations, Governments and private institutions, organizations and enterprises".

5. At its session in April 1988, the ECE adopted a decision on the follow-up of the WCED report in the ECE region, which welcomed the initiative of the Government of Norway to organize a regional conference with the dual purpose of

- reviewing progress in the follow-up of selected aspects of the WCED report; and

- identifying initiatives for further measures of relevance to the ECE region.

(ii) Venue and Invitations

6. Following the ECE decision, the Norwegian Government decided to hold the "Conference in the City of Bergen from 8 to 16 May 1990, under the title "Action for a Common Future".

(iii) Secretariat

7. A Conference secretariat was set up within the Ministry of Environment in Oslo. Throughout the preparations, in Norway, close contacts were maintained with

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other relevant ministries, in particular, the Ministries of Foreign Affairs and of Finance and the Prime Minister's Office. Furthermore a national steering group for the Conference was established with representatives from the relevant ministries and non-governmental groups.

8. There was continuous dialogue with the ECE secretariat, and consultations were also held with UNEP at regular intervals. The secretariat also greatly benefited from the services of two civil servants from the United Kingdom and Canada who were seconded to the secretariat.

(iv) Conference Budget

9. Over a two-year period, the Norwegian Government spent approximately NOK 20 million ($US 3 million) for the Conference. A number of ECE member States (Austria, Belgium, Canada, Denmark, the Federal Republic of Germany, France, Hungary, the Netherlands, Poland, Sweden, the United Kingdom and the United States), as well as the ECE secretariat, the European Communities and the International Chamber of Commerce contributed to the Bergen process, including financing for participation of some observers from developing countries.

(v) Draft Conference Agenda

10. After informal consultations with ECE member States, four main themes were selected to be included in the Conference agenda:

(i) Awareness raising and public participation;

(ii) Sustainable industrial activity;

(iii) Sustainable energy use;

(iv) The economics of sustainability.

11. It was also decided that relevant North-South aspects should be dealt with under each main theme.

(vi) National Reports

12. In response to the first element of the mandate for the Conference, each ECE Government was invited to submit a report on the national follow-up to the WCED report within the four selected policy areas. Governments were encouraged to prepare the report in co-operation with major non-governmental sectors in their country.

(vii) Synthesis Document

13. On the basis of 22 national reports received by the end of September 1989, the ECE secretariat prepared a synthesis document which was used as an input in the subsequent preparatory meetings for the Conference. A revised version was prepared in April 1990 on the basis of 26 national reports received, and served as an official Conference document.

(viii) Preparatory Committee

14. An open-ended Preparatory Committee composed largely of representatives of Ministries of Environment and/or Foreign Affairs of ECE Governments met twice.

15. At its 1st meeting in Bergen from 6 to 8 September 1989, the Committee agreed on the four main themes and key events, dates, location and sequence of preparatory meetings. The ECE was represented and participated in the meeting. The Committee elected a Bureau with Ambassador Martin Huslid of Norway as Chairman.

16. The Committee also accepted the basic concept of the Conference itself, which, in the spirit of the World Commission, was designed to stimulate cross-sectoral dialogue between public authorities with different responsibilities, as well as to foster alliance-building between public authorities and non-governmental groups.

17. Thus, the Committee decided that five selected non-governmental sectors should be invited to take part both in the preparations for and in the Conference itself, i.e. industry, trade unions, youth, science, and the voluntary organizations.

18. The Committee also stated that efforts should be made to encourage and facilitate the participation as observers of representatives from developing countries, and that "wherever possible and relevant, the problems and issues of concern to developing countries would be considered".

19. The Committee's 2nd meeting took place in Geneva from 5 to 9 March 1990 in full co-operation with and serviced by the ECE. It established a drafting group under the chairmanship of Mr. Kåre Bryn, Norway, for the Ministerial Declaration and another, consisting of both Governments and representatives of the five NGO groups, to prepare the Agenda for Action.

20. The Committee also heard a report from the Secretary General of the Conference, Mrs. Eldrid Nordbø, on the organization of the Conference, and agreed on the composition of the Bureaux for the Working Session and the Ministerial Session.

(ix) Workshops

21. At the invitation of four ECE Governments, workshops on the selected themes of the Conference were organized:

(i) Awareness Raising and Public Participation, Selsdon Park, United Kingdom, 22-24 September 1989;

(ii) Sustainable Industrial Activity, Warsaw, Poland, 22-24 November 1989;

(iii) Sustainable Energy Use, Velen, Federal Republic of Germany, 11-14 December 1989;

(iv) The Economics of Sustainable Development, Washington, D.C., United States, 24-26 January 1990.

22. The purpose of the workshops was to review progress made in the implementation of relevant recommendations of the WCED and make proposals for concrete follow-up action by the public and private sectors in ECE countries, which could be considered at the Conference. The ECE synthesis document and other commissioned papers served as inputs for these meetings.

23. All four workshops served to bring together experts from East and West and from the public and private sectors to discuss priorities, targets and actions for sustainable development. Their reports, although not binding on Governments, served as official Conference documents and a useful working basis in the elaboration of the final documents. Thus, the practical and economic contributions of the host Governments and the input of the participants provided invaluable support for the Bergen process. The ECE participated in all the workshops and made a contribution to each.

(x) Non-governmental preparations

(a) Focal Points

24. Following the decision of the Preparatory Committee to include NGOs in the Conference and based on consultations among the NGOs, five "focal points" were established:

- Voluntary organizations: A steering committee with representatives from the various subregions (North America, the European Communities, East Europe and the European Free Trade Association). A steering committee was elected to co-ordinate the preparations for Bergen. The Steering Committee was elected by a consultative meeting of some 25 European and North American organizations to co-ordinate the preparation of the voluntary organizations for Bergen. The European Environment Bureau (EEB) (through the Green Alliance, a U.K.-based organization) served as a secretariat.

- Industry: The International Chamber of Commerce (ICC), Paris.

- Science: The Norwegian Research Council for Science and the Humanities (NAVF) in liaison with the European Science Foundation (ESF).

- Trade Unions: The Secretary to the Workers' Group in the Governing Body of the International Labour Organisation (ILO).

- Youth: The National Council of Norwegian Youth Organizations (LNU), in liaison with the Council of European National Youth Committees (CENYC) and the All-European Youth and Student Co-operation (AYSEC).

(b) Preparations

25. The five NGO groups participated regularly in the Bergen preparatory process. The five groups took very different approaches in preparing their inputs to the Bergen Conference.

Voluntary organizations

26. Three hundred and fifty representatives from more than 300 environment and development organizations met from 19 to 21 March 1990 on the Danube. The title of the conference was "Bridging the Gap", reflecting a wish of the organizations to mark the new mood of co-operation in Europe, and to build a bridge between words and action. The document resulting from the Danube meeting was presented to the Bergen Conference, and served as the voluntary organizations' proposal for an Agenda for action.

Industry

27. A special "Industry Forum on Environment" for nearly 200 chief executive officers from 25 countries took place in Bergen on 10 and 11 May under the auspices of the ICC and the Nordic industrial confederations to prepare an Industry Agenda for Action, which was presented at the Ministerial Session of the Bergen Conference.

Science

28. A special meeting entitled "Sustainable Development, Science and Policy" was organized in Bergen from 8 to 12 May by the NAVF and ESF. More than 100 eminent scientists, representing most ECE countries as well as several developing countries, and spanning all the major scientific disciplines, including the social sciences, participated. An executive summary of the results of the science meeting was presented to the Ministerial Session of the Bergen Conference. Some of the scientists were also appointed to participate in the main Conference and provide the link between the two conferences.

Trade Unions

29. An input document prepared under the auspices of the International Confederation of Free Trade Unions (ICFTU) was discussed by trade union delegates in a preparatory meeting on 7 May in Bergen. The revised version was presented to the Conference as the trade unions' proposal for an Agenda for Action.

Youth

30. A special youth conference entitled "Youth Action for a Common Future" was held in Bergen from 5 to 7 May under the auspices of CENYC, AYSEC and LNU. More than 100 youth organizations leaders from the ECE region participated. The meeting agreed on a Youth Agenda for Action to be presented at the Conference.

III. THE BERGEN CONFERENCE

31. The Conference consisted of two parts - a Working Session and a Ministerial Session.

32. The Conference was opened in the presence of His Majesty the King of Norway. The opening address by Mr. Jan P. Syse, Prime Minister of Norway, welcomed the delegates and outlined the structure of the Conference. Other speakers included

Ms. Gro Harlem Brundtland, Member of Parliament and former Chairman of the World Commission on Environment and Development; Mr. Gerald Hinteregger, Executive Secretary of the United Nations Economic Commission for Europe; Ms. Nafis Sadik, Executive Director, United Nations Population Fund; Mr. Lester R. Brown, President, Worldwatch Institute, Washington D.C.; and Mr. Bengt Martin Olsen, Mayor, City of Bergen.

(i) Working Session (8-11 May)

33. The Working Session was attended by 427 delegates from Governments and the five NGO groups. Reflecting the multisectoral character of the Working Session, several countries included non-governmental representatives in their national delegations and 29 had participants from more than one ministry. The five NGO groups were represented by 173 delegates. Observers were present from 11 other Governments, 20 United Nations and other international organizations, and 8 international NGOs.

34. A bureau was elected for the Working Session with the Vice-Presidents, as listed below, having the additional responsbility of chairing the open fora and negotiating meetings on Awareness Raising, Energy, Industry, and Economics, respectively. Members of the Bureau were as follows:

President: Ms. Kristin Hille Valla, Minister of the Environment, Norway

Vice-Presidents: Voluntary Organizations: Ms. Fran Spivy-Weber, Director, International Programmes, National Audubon Society, USA

Dr. Edda Muller, the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, Federal Republic of Germany

Industry: Mr. Peter Bright, Chairman, Sustainable Development Working Party, International Chamber of Commerce

Prof. Dr. Istvan Lang, Secretary General, Academy of Sciences, Hungary

Rapporteur-General: Dr. Pierre Marc Johnson, Member of the Canadian Round Table on Economy and Environment, Canada

35. The Rapporteur-General was assisted by a team of eight rapporteurs drawn equally from government and non-government sources, as follows:

(1) Awareness Raising and Public Participation

Mme. Patricia Maugain, Chargée de Mission, Secrétariat d'Etat à l'Environnement, France

Youth: Ms. Rachel Kyte, Council of European National Youth Committees

(2) Sustainable Energy Use

Mr. Igor Smirnov, Director, Energoset Projekt, USSR

Voluntary Organizations: Ms. Fiona Reynolds, Council for the Protection of Rural England, UK

(3) Sustainable Industrial Activity

Mr. Pawel Blaszczyk, Institute for Environmental Protection, Poland

Trade Unions: Mr. Reg Green, International Confederation of Free Trade Unions

(4) Economics of Sustainable Development

Mr. Joao-Bernardo Weinstein, Ministry of Foreign Affairs, Portugal

Science: Mr. Robert Repetto, World Resources Institute, USA

36. The negotiations on the Joint Agenda for Action were based on the draft prepared by the Preparatory Committee in March 1990 which drew on the results of the four preparatory workshops.

37. Each of the themes were discussed in open forum, followed by a negotiating meeting which debated the text of the agenda.

38. The open forum not only had the participation of all delegates but also the general public. It was arranged around a panel which consisted of representatives from the five NGO groups, two rapporteurs, and a vice-president acting as chairman.

39. Each theme was introduced by the workshop host country who reviewed the proposals and actions recommended by Governments and non-governmental groups at their workshop. This was followed by short statements on the theme by each of the five NGO groups and upon completion of these, the floor was opened to all delegates and the public for questions and comments. With three hours devoted to each of the themes, inputs were brief with the rapporteurs recording new suggestions to be carried forward to the negotiating meeting.

40. While the open forum allowed all delegates and general public to contribute, the negotiations were limited to government representatives and NGO representatives.

41. The Working Session closed on 11 May with the adoption of the Joint Agenda for Action and statements by the President, the Rapporteur General, spokesmen for the five NGO groups and by Mr. Maurice Strong, Secretary General for the 1992 Conference on Environment and Development.

(ii) The Outcome of the Joint Agenda for Action

42. The Working Session of the Conference was a first instance where the member countries of the ECE collaborated with major NGO groups in outlining and agreeing on what measures are necessary to attain sustainable development in the region, how

to have a positive influence on the global commons and how to assist developing countries in meeting their needs through sustainable development. This was reflected in the introduction of the Joint Agenda for Action which stated:

> "The collaborative participation of Governments and five non-governmental groups has greatly enriched the Bergen Conference. The non-governmental organizations have held their own conferences and in the four workshops they worked closely with government representatives to draw up wide range of innovative proposals.
>
> "During the discussions and consultations, a variety of policy and action proposals were identified which, in the opinion of participants, warrant study, elaboration or further action. These ideas have been collected in the following Joint Agenda for Action."

43. At the opening of the Ministerial Session, the Rapporteur General highlighted the following points:

44. The Joint Agenda for Action produced by the government officials and representatives of the NGO groups constituted a first effort at collectively agreeing on sustainable development concepts and principles warranting study, elaboration or further action, and reviewing some of their applications. It was as comprehensive as a document negotiated between various interests could be. It offered an integrative approach to environmental and developmental issues which went beyond the traditional conservationist approach by stating that all environmental and developmental issues should be integrated in governmental policies.

45. Under the heading "Awareness Raising and Public Participation", it asserted very clearly that the participation of all sectors of society, Youth, Voluntary Organizations, Women, Industry, Science, Trade Unions, aboriginal groups and others, in implementing sustainable development was vitally important and proposed:

- To increase the availability of knowledge through the improvement of environmental data bases, the integration of sustainable development in school curricula the provision of support to interdisciplinary scientific training programmes, the advancement of public awareness through inter alia standardization of labelling and logos of environmentally friendly products.

- To build on the conclusions of the 1989 Sofia Conference on Security and Co-operation in Europe (CSCE) which includes the free expressions of views, the right of association and peaceful assembly, access to information, and to have these rights elaborated in a document for the 1992 World Conference on Environment and Development.

- To support institutional changes at all levels that will facilitate exchange of experiences, learning and decisions with the broad participation of groups and persons as well as the extension of environmental assessment mechanisms and the formation of round tables.

46. The Joint Agenda for Action stated that future economic development should not be based on an increased consumption of energy and raw materials but instead must stress greater efficiency and reduced inputs. It should take into account a profound interdependence of North and South in using the earth's resources so as to establish our common future.

47. In order to assure that future generations are provided with natural resources, knowledge, skills and man-made physical capital enabling them to fulfil their needs, it proposed that:

- Environmental policies, including economic instruments, should be co-ordinated in order to avoid competitive distortions. International agreements should pay special attention to the environmental impact of trade practices while multilateral banks should integrate sustainable development principles in all their policies.

- Pricing systems, taxes and incentives for those exploiting natural resources, as well as consumers, should result in care for the environment and be consistent with the "users pay and polluters pay principles". The accounting of wealth should include the preservation or replacement of natural capital such as forests, water and fertile soil. Furthermore, national accounts should reflect the depreciation of natural assets that accompanies their exploitation and which in some instances deprives future generations of options for development.

- Countries possessing rich biological diversity need to receive the economic benefits from that diversity so as to provide stronger incentives for their conservation; and

- Governments and all organizations concerned with environmental awareness must become and act as Green Consumers in their purchasing of environmentally friendly products and recyclable materials.

48. The Joint Agenda emphasized that energy efficiency and conservation must lie at the heart of sustainable energy strategies. It stressed the necessity:

- To use energy efficiency targets to reduce the consumption of fossil fuels in residential and commerical sectors, and financial means which would result in best available practice and energy standards in ECE countries. Such standards should be strict but the means to attain them flexible. Furthermore, Governments should seriously consider ending subsidies which have the effect of maintaining artificially low prices for environmentally detrimental uses of energy.

- To stabilize emissions and to do their utmost to ensure adoption of a framework convention on climate change not later than 1992, with the necessary protocols of application, taking into account the best available scientific knowledge including the results of the Intergovernmental Panel on Climate Change (IPCC), the Conference on Sustainable Development, Science and Policy in Bergen and the Toronto Conference, as well as

previous international meetings. Some countries have adopted as a preliminary target the stabilization of CO_2 emissions at the present levels by the year 2000 and invite other countries to follow suit.

- To ensure appropriate levels of support for the development and use of renewable energy technologies, and a commitment to the scientific community for their research and development efforts in the transition to a sustainable energy future.

- That individuals, particularly in the ECE countries, recognize their contribution to atmospheric pollution through their daily lives. Transportation should shift from road to rail, public transportation and the use of bicycles should be promoted. New cars, buses and trucks should be equipped with the best available technology for the reduction of emissions and increased fuel efficiency.

49. Industry would remain an essential provider for human needs. Yet it must adapt rapidly and shift to a rational and efficient approach to sound resource use, pollution prevention and waste minimization. Sustainable industrial development was possible and steps to achieve it could include:

- Further studies of the implications and possible use of concepts such as best available technology without entailing excessive costs, critical loads, emission quotas, and strictest standards.

- Audits as a management tool to check that environmental equipment, management systems and procedures are being properly applied. This should be accompanied by adequate information, training of workers, and a satisfactory degree of worker participation within industry.

- Self-imposed codes that go beyond strict legal requirements.

- Establishment of environmental guidelines which would discourage industries from relocating to countries with lower environmental standards solely to avoid pollution.

- Initiation of a process that would lead to a convention on the prevention of marine pollution from industrial sources. By 1992 Governments should have agreed on a timetable on phasing out pollution caused by environmentally damaging substances with emphasis on avoiding production and use of substances not adequately controlled.

- Preference of prevention of pollution rather than waste control and disposal methods.

- Assistance to developing countries in complying with global environmental agreements, and from specialized centres in implementing clean production methods. Technology transfers of clean technology should cover management and services as well as equipment.

50. The Rapporteur General concluded that:

"Mankind's sense of survival and his willingness to share a place in the continuum of time with future generations seems to be awakening.

"We saw last week not only an exercise of exchange and negotiation involving diverse interests but mostly the development and coming together of commitment to and the emergence of a common will. This is the only lucid and generous way with which we can build a future that is both ours and common."

(iii) The Ministerial Session (14-16 May)

(a) The opening

51. The Ministerial Session assembled 303 delegates from 34 Governments, 17 delegates from seven observer Governments as well as the ECE secretariat and other United Nations organs and agencies. The cross-sectoral character of the conference was evident since 65 of the government delegates were from other Ministries than those responsible for the environment as such. A third of the Governments had also included NGOs in their delegations.

52. The session was opened by Mr. Jan P. Syse, Prime Minster of Norway, followed by Mr. Rafeeuddin Ahmed representing the Secretary-General of the United Nations, the Executive Director of UNEP, Dr. Mostafa K. Tolba, and the President of the African Ministerial Conference on Environment, Mr. J. J. Nyagah. This was followed by a statement summing up the results of the Working Session by its Rapporteur-General, Mr. Pierre Marc Johnson, and statements by each of the five participating NGO groups. The Ministers took note of the Joint Agenda for Action.

53. The ministerial debate itself was opened by the Executive Secretary of the ECE, Mr. Gerald Hinteregger, followed by Mrs. Gro Harlem Brundtland, member of Parliament, Norway, and former Chairman of the World Commission on Environment and Development. The other introductory speakers were:

- Prof. Dr. Klaus Topfer, Federal Republic of Germany, Minister of the Environment, Nature Protection and Reactor Safety

- Mr. Bronislaw Kaminski, Poland, Minister of the Environmental Protection and Nature Conservation

- Mr. David Trippier, United Kingdom, Minister of State for the Environment

- Dr. John Knauss, United States of America, Administrator of the National Oceanic and Atmospheric Administration

- Mr. Carlo Ripa di Meana, the European Communities, Commissioner of Environment.

54. The election of officers for the Ministerial Session included:

President: Mr. Tom Vraalsen, Minister for Development Co-operation, Norway

Vice-Presidents: Mr. Alexander Alexandrov, Minister of Environment, Bulgaria

Mr. Lucien Bouchard, Minister of Environment, Canada

Mr. Padraig Flynn, Minister of Environment, Ireland

Mr. Bedrich Moldan, Minister of Environment of the Czech Republic, Czech and Slovak Federal Republics.

(b) The Ministerial Declaration

55. The input documents to the Ministerial Session were the Workshop reports, the synthesis of the national reports prepared by the ECE, the draft declaration from the preparatory committee and the Agenda for Action.

56. The debate on the draft declaration heard from Ministers of all ECE countries, the observer countries and representatives of the United Nations agencies. The Ministerial Session closed on 16 May with the adoption of the Ministerial Declaration followed by statements by the President, Mr. Tom Vraalsen, and Mr. Maurice Strong, Secretary General of the 1992 United Nations Conference on Environment and Development.

57. In his closing address, Mr. Tom Vraalsen presented the achievements agreed to by the Ministers in this way:

- To expand sustainable development decision-making and accountability by integrating environmental considerations with economic and sectoral policies and issuing annual reports by Government and industry on progress made.

- To develop GNP indicators for regularly measuring and assessing progress towards sustainable development.

- To make more extensive use of economic instruments in conjunction with a balanced mix of regulatory approaches to modify production and consumption patterns and encourage the use of environmentally sound and resource and energy efficient technologies.

- To encourage the extension in public agencies of purchasing practices which favour environmentally sound products and services.

- To encourage the use of labelling schemes for informing consumers of the environmental quality and risks of industrial products from "cradle to grave" (e.g. logos, product declarations, process declarations) and also indicating the energy efficiency of products, processes, buildings, and vehicles.

- To introduce and update comprehensive policies to remove the existing barriers for market penetration of energy efficient technology, renewable energy and clean life-cycle technology and to increase funding for R&D on renewable energy sources and promote energy efficient processes in all sectors.

- To promote transport policies and systems to reduce the harmful effects of the transport sector on the environment (e.g. improve the efficiency of public transport; favour the use of more energy efficient motor vehicles with low emission levels; set maximum speed limits, bans on idling, traffic-free urban areas and bicycle paths).

- To expand environmental aid by supporting, in addition to present development assistance, programmes to increase the flow of capital and environmentally sound technology to developing and East European countries to assist the efforts by the receiving countries on high priority resource and environmental management projects. In particular it will be necessary to idenfiy new ways and means of providing such resources to developing countries.

- To accelerate the sustainable development of trade dialogue based on interlinkages between environmental and trade policies e.g. on the role of international trade in promoting sustainable development; on how to ensure that trade does not bring about harmful environmental consequences and to encourage investors to apply environmental analysis procedures and the environmental standards required in their home country to investments abroad.

58. The Ministers also set new priorities for their co-operation at the regional and global levels and agreed:

- To initiate an ECE-wide "Energy Efficiency 2000" campaign to enhance trade and co-operation in energy efficient, environmentally sound techniques and management practices and close the energy efficiency gap between actual practice and best technologies, particularly between East and West Europe, nationally, bilaterally, multilaterally, and especially through the ECE.

- To prepare a document on the environmental rights and obligations of individuals, groups and organizations for possible adoption at the 1992 Conference on Environment and Development (e.g. the right to free and open access to relevant information on environment, to be consulted and participate in planning and decision-making which may affect human health and the environment).

- To base national and international policies on the precautionary principle in order to anticipate, prevent and attack the causes of environmental degradation.

- To use the concept of critical loads as a guideline where science has provided the necessary information to formulate and implement adequate national and international abatement and conservation strategies.

- To agree on regional timetables by 1992 for phasing out those uses of hazardous substances which cannot be adequately controlled and to encourage the safe and appropriate use and disposal of hazardous substances based on a full assessment of risks to human health and the environment.

- To strengthen co-operation on the prevention, control and mutual assistance to deal with the transboundary impacts of industrial accidents such as the accident at Chernobyl nuclear power station.

- To phase out disposal of wastes at sea as soon as possible in accordance with the provisions of the London Dumping Convention, unless the disposal poses no threat to the marine environment.

- To limit or reduce CO_2 emissions and other greenhouse gas emissions as much as possible and in the view of most ECE countries to stabilize them, by the year 2000 and at present levels as a first step and to commit themselves to establish national strategies and/or targets and schedules following the report of the IPCC and no later than the start of the negotiations of a framework convention on climate change.

- To strengthen international action to protect the ozone layer, including, for example, through additional resources and technology transfer, and to call on those ECE members who have not already done so to ratify or accede to the Montreal Protocol and on the meeting of the Parties to the Montreal Protocol in London in June 1990, recognizing that it will be necessary to contribute to the fulfilment of the financial and other conditions to be agreed by the Parties to encourage a broader participation in the Protocol, which they, the Ministers, were prepared to do.

59. The preparatory process and Working Session which preceded the Ministerial Session included as full partners the representatives of a wide cross-section of groups in society: industry, the scientific community, trade unions, voluntary organizations and youth.

60. Together, the representatives of these groups and of Governments prepared the Bergen Joint Agenda for Action.

61. The Ministers commended the partners for their co-operation in the preparatory process and negotiations and for their significant achievement.

62. The Ministers recommended the establishment or continued use of national Round Tables or Committees or comparable processes to promote the integration of environmental considerations in all economic and social activities.

63. To strengthen international co-operation, the Ministers strongly recommended "that the experience gained in the preparation and conduct of the Bergen Conference with respect to the full involvement of non-governmental organizations be used by

other Regional Commissions of the United Nations and by the Preparatory Committee of the 1992 Conference on Environment and Development". (29)*

64. The Ministers also urged Governments and others concerned to contribute generously to the voluntary fund established for the purpose of assisting developing countries to participate fully and effectively in the 1992 Conference and in its preparatory process.

IV. THE PROCESS AFTER BERGEN

65. Governments agreed to work towards sustainable development not only within the ECE region but also globally, with due attention to the needs of developing countries. (17) Specific requests were directed to the ECE as well as to other international organizations for follow-up.

66. Closer economic and environmental co-operation was welcomed, taking into account the need for more differentiated commitments. (18)

67. Governments agreed to ensure "that assistance to East Europe for environmental purposes does not reduce our aid to developing countries". (18)

68. ECE Governments would continue their efforts to make the Montreal Protocol operational. They were prepared to "contribute to the fulfilment of the financial and other conditions to be agreed by the Parties to encourage a broader participation in the Protocol". (24)

69. In addition to these mechanisms the need for environmental data and monitoring of results was stressed.

70. Ministers welcomed the decision that participation in the Environment Agency established by the European Communities should be open on mutually acceptable terms to other countries of the ECE region. This would assist in the effective implementation of environmental policies, and in informing the public on the state of the European environment. UNEP, WMO, ECE and OECD were invited to co-operate actively in the work of the Agency.

71. National and international round tables could be a fruitful way of organizing the discussion of new environmental policies. They welcomed "the organization of an NGO's meeting to be held in Paris in 1991, in order to prepare for their participation at the 1992 Conference". (29)

72. Ministers agreed that there was a need to review the results of the Bergen Conference as well as of the 1992 Conference. In order to do this, a high-level meeting of countries in the ECE region should be convened, in full co-operation with the NGOs and with the ECE.

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* Numbers in brackets refer to the paragraphs of the Ministerial Declaration.

Annex I

BERGEN MINISTERIAL DECLARATION ON SUSTAINABLE DEVELOPMENT IN THE ECE REGION

Sustainable development meets the needs of the present without compromising the ability of the future generations to meet their own needs

1. We, the Ministers from 34 countries in the ECE region and the Commissioner for the Environment of the European Community, met at Bergen, Norway, from 14 to 16 May 1990, at the Regional Conference on "Action for a Common Future" organized by the Government of Norway in co-operation with the United Nations Economic Commission for Europe (ECE).

2. Our meeting, the second on an inter-ministerial basis at the regional level, is part of the international follow-up for the report of the World Commission on Environment and Development. Our meeting is also a demonstration of our intention to take an active and constructive role in the preparations for the 1992 United Nations Conference on Environment and Development.

3. We have had the benefit of a preparatory process which included as full partners the representatives of a wide cross-section of groups in our society: industry, scientists, trade unions, voluntary environmental organizations and youth. Representatives of these groups have together with Governments prepared the Bergen Agenda for Action of which we take note.

4. That process included four workshops focused on the following four themes: the Economics of Sustainability; Sustainable Energy Use; Sustainable Industrial Activities; and Awareness Raising and Public Participation.

I. COMMON CHALLENGES

5. Today destruction of the biosphere and its ecosystems, environmental degradation, population pressures, depletion of resources, and extinction of species threaten the quality of human life as well as human health and many of the earth's biological systems. Unsustainable patterns of production and consumption, particularly in industrialized countries, are at the root of numerous environmental problems, notably foreclosing options for future generations by depletion of the resource base.

6. The challenge of sustainable development of humanity depends on providing sustainability of the biosphere and its ecosystems, and also requires action by national Governments, as well as collaborative action by national Governments and international and non-governmental organizations. Within the concept of sustainability, common objectives and concrete measures must be defined. Since sustainability cannot simply be achieved by action only at the level of individual ecosystems, economic sectors and geographic regions, a combination of national

assessment and response and international co-ordination and co-operation is needed.

7. In order to achieve sustainable development, policies must be based on the precautionary principle. Environmental measures must anticipate, prevent and attack the causes of environmental degradation. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

8. Environmental problems require greater and more systematic use of science and scientific knowledge. Environmental science activities must therefore be strengthened nationally and internationally. We invite the international science community to contribute towards the advancement of sustainable development policies and programmes. Scientific analyses and forecasts are especially needed to help identify longer term policy options.

9. The evolving political and economic processes in Europe will provide new opportunities for member countries of ECE to co-operate more actively in implementing the provisions of the Helsinki Final Act of the Conference on Security and Co-operation in Europe (CSCE) and in particular the conclusions and recommendations of the concluding documents of the Vienna Meeting of the CSCE (1989), of the CSCE Meeting on the Protection of the Environment held in 1989 in Sofia and of the Bonn Conference on Economic Co-operation in Europe (1990) as well as the ECE Regional Strategy for Environmental Protection and Rational Use of Natural Resources.

10. We believe that the attainment of sustainable development on the national, regional and global levels requires fundamental changes in human values towards the environment and in patterns of behaviour and consumption as well as the establishment of necessary democratic institutions and processes.

11. Member countries of the ECE and the European Community are fully cognizant of their special responsibilities in relation to global environmental problems and are ready to take a lead in the effort towards solving those problems and to assist developing countries in their environmental and developmental efforts.

12. We have agreed to the following policies, objectives, principles and commitments in support of sustainable development nationally, regionally and globally.

II. THE ECONOMICS OF SUSTAINABILITY

13. Taking into account the symbiotic nature of economy and the environment:

(a) To integrate environmental considerations with economic and sectoral planning and policies and to encourage all relevant institutions to be accountable for evaluating environmental effects of their programmes and policies.

(b) To develop sound national indicators for sustainable development to be taken account of in economic policy making. One of the ways to achieve this is to supplement national accounting systems in order to reflect as fully as possible the importance of natural resources as depletable or renewable economic assets. To this end we call upon the United Nations to accelerate its work on natural resource accounting and pollution control expenditures as production costs, and the Organisation for Economic Co-operation and Development (OECD) to intensify its work on economic indicators. To investigate the possibilities of changing the present forms of resource accounting in investment analysis in order to give greater emphasis to long-term sustainability compared with short-term considerations.

(c) To make more extensive use of economic instruments in conjunction with a balanced mix of regulatory approaches in order to increase efficiency of environmental protection, of the use of natural resources and of energy consumption. Such instruments may include:

- taxes on environmentally damaging activities and products or energy inefficient products;

- reduction or, wherever possible, elimination of subsidies to resource-intensive or environmentally damaging activities;

- other measures such as emission charges and fees, deposit refund systems and tradeable permits and fiscal incentives.

Such actions would make prices, particularly those related to energy, reflect environmental costs and benefits more fully, and thus send market signals and provide incentives. They would modify production and consumption patterns and encourage use of environmentally sound and energy efficient technologies.

(d) To work towards a co-ordinated approach to the use of economic instruments which would be facilitated by guidelines and studies by international organizations, particularly the OECD, ECE and EC. In this context, we welcome the OECD's work on preparing principles and international guidelines which will be presented to its meeting of Environment Ministers in 1991.

(e) To support, in addition to present development assistance, programmes to increase the flow of capital and environmentally sound technology to developing and East European countries to assist the efforts by the receiving countries on high priority resource and environmental management projects and to meet their international obligations to protect the global environment. In particular it will be necessary to identify new ways and means of providing such resources to developing countries. We welcome the decision of the Development Committee of the World Bank and the International Monetary Fund on 8 May 1990, which urges the Bank, in close collaboration with UNEP and UNDP and other interested parties, to proceed expeditiously with the development of proposals for a pilot global environmental mechanism.

(f) To urge donors and multilateral agencies to take into account the relationship between debt service burdens and the ability of countries both within

and outside the ECE to carry out measures to ensure the protection of the environment. We will also urge bilateral and multilateral partners and financial institutions to take full account of environmental considerations and opportunities for natural resource savings in their project and structural adjustment lending operations and debt-for-nature swaps, so that these operate in accordance with the principles of sustainable development.

(g) To address the relationship between population pressures and sustainable development. ECE donors should work with countries experiencing rapid population growth to assist them at their request in implementing their population policies.

(h) To accelerate in the OECD, ECE, GATT, UNCTAD, the European Community and other appropriate forums the dialogue on the interlinkages between environmental and trade policies. The dialogue should focus on, inter alia, the role of international trade in promoting sustainable development and on how to ensure that trade does not bring about harmful environmental consequences.

(i) To encourage the extension of public purchasing practices which favour environmentally sound products and services.

III. SUSTAINABLE ENERGY USE

14. Taking into consideration that the ECE region presently accounts for about 70 per cent of global primary energy and fossil fuel use, we assume a major responsibility to limit or reduce greenhouse gases and other emissions and to lead a global effort to address this matter by promoting energy efficiency, energy conservation and the use of environmentally sound and renewable energy sources.

(a) To initiate an ECE-wide campaign "Energy Efficiency 2000" to enhance trade and co-operation in energy efficient, environmentally sound techniques and management practices to close the energy efficiency gap between actual practice and best technologies, and between our countries, in particular between East and West, through national actions, bilaterally, multilaterally and especially through the ECE. We envisage that, through these efforts, this gap will be considerably narrowed by the year 2000.

(b) To reaffirm our continued support for the IPCC as the principal forum for scientific assessment related to climate change, the potential impacts of such changes, and the options available for preventing or adapting to changes in the climate of the earth. The process of the IPCC should be supported by the investigation of the feasibility of achieving targets to limit or reduce CO_2 and other greenhouse gas emissions including e.g. a 20 per cent reduction of CO_2 emission level by the year 2005 as recommended by the Scientific World Conference on the Changing Atmosphere in Toronto 1988.

(c) To pledge our full support for the early completion of the work on a framework convention on climate change and the development of protocols dealing with, inter alia, greenhouse gases and forestation, with a view to signing not later than at the 1992 Conference on Environment and Development. The development

of the convention and its associated protocols should be based on the best scientific evidence available, provided primarily by the report of the IPCC, and drawing upon the Toronto Conference recommendations, the Noordwijk 1989 declaration, and the report of the Bergen Conference on Sustainable Development, Science and Policy.

(d) To recognize the need to stabilize, while ensuring stable development of the world economy, CO_2 emissions and emissions of other greenhouse gases not controlled by the Montreal Protocol. The industrialized nations have agreed at Noordwijk that such stabilization should be achieved by them as soon as possible, at levels to be considered by the IPCC and the Second World Climate Conference. To fulfil this need, and

- noting with appreciation that some countries have already committed themselves in advance to stabilize CO_2 emissions at present levels or to reduce them by the year 2000;

- recognizing that countries with, as yet, relatively low energy requirements, which can reasonably be expected to grow in step with their development, may need strategies or targets which can accommodate that development;

- also recognizing that strategies or targets could be based, for example, on total emission levels, per capita emissions, climatic conditions or other equitable considerations.

We urge all ECE countries to take action now, and we agree to commit to establish national strategies and/or targets and schedules following the report of the IPCC and no later than the start of the negotiations of a framework convention on climate change to limit or reduce CO_2 emissions and other greenhouse gas emissions as much as possible and to stabilize them. In the view of most ECE countries, such stabilization at the latest by the year 2000 and at present levels must be the first step.

(e) All ECE member countries should work individually and collectively towards reducing SO_2 and NO_x emissions and to support the early completion of a protocol on VOCs (volatile organic compounds).

(f) To recommend that the establishment and implementation of adequate abatement and conservation strategies should be guided by the principle of prevention and minimization of emissions in the most cost beneficial and cost-effective way and making use, as appropriate, of the best available technologies, which continuously should be improved, not entailing excessive costs. The concept of critical loads should serve as a guideline to formulate these strategies where science has provided the necessary information.

(g) To introduce and update an energy labelling system and voluntary agreements or mandatory standards, as may be appropriate, for products and processes aimed at improving energy efficiency of buildings and appliances. Governments should promote improved energy-efficiency in motor vehicles by use of

labels and other measures that provide information on expected energy consumption and by the setting of guidelines or standards for fuel efficiency for new vehicles. These approaches should be facilitated by co-operative action of interested countries and organizations. We ask ECE to review progress in this regard at regular intervals.

(h) To introduce and update comprehensive policies to remove the existing barriers for market penetration of energy efficient technology, renewable energy and clean life-cycle technology and to promote energy efficient processes in all sectors. The funding of research, development and demonstration for renewable and non-renewable energy sources should be brought into a reasonable balance. In some countries, this should result in increased funding for renewables.

(i) To reduce the harmful effects of the transport sector on the environment by promoting fast, safe and convenient urban and regional transport services and reducing urban car traffic by means of a co-ordinated strategy reflecting national circumstances to:

- improve the efficiency of public transport services such as railways, underground trains, and buses;

- favour use of more energy efficient motor vehicles with low emission levels through economic, regulatory or other instruments noting, inter alia, the encouraging progress in the development of the lean-burn engine and that small car prototypes have achieved 2-4 litres per hundred kilometres in test conditions;

- consider the introduction of maximum speed limits, bans on idling, traffic-free urban areas, and bicycle paths;

- encourage physical planning and traffic management as instruments for promoting an urban development with a sound and clean transport infrastructure and low transport demand; encourage development of environmentally preferable alternative fuel vehicles and technologies;

- utilize information campaigns or other measures to encourage a change in transport behaviour;

- pay increased attention to air transport efficiency;

- further develop a joint strategy within the ECE framework for improving and integrating public and goods transportation with railways and waterways in mainland Europe including the harmonization of technical standards in rail transportation, particularly with a view to developing transportation between East and West Europe.

(j) All relevant international organizations are requested:

- to exchange environmentally favourable proposals, ideas and recommendations in order to emphasize and implement the most progressive standards;

- to facilitate and support the use of existing services for international transfer of energy and environmental technologies and related management skills, especially to developing countries.

(k) All ECE member countries should work individually and collectively towards redressing any imbalances which may exist in international institutional arrangements for addressing questions related to renewable sources of energy compared to other energy sources. Similarly the balance between institutional arrangements for different modes of transport should be examined.

IV. SUSTAINABLE INDUSTRIAL ACTIVITIES

15. Taking note of the need for our countries to further develop national and regional strategies for preventing pollution from industrial activities:

(a) To encourage in industry and in society approaches which address all phases of the life cycle of a product with the objective of minimization of short- and long-term risks to human health and the environment.

(b) To strengthen regulations and economic incentives for promoting environmentally sound production processes which include, inter alia, the modification of processes to make more efficient use of raw materials and to reduce generation of pollutants and to encourage recycling and other methods to minimize waste. To work actively towards replacing hazardous chemicals with ones that are less hazardous or can be handled in a safer way.

(c) To encourage the safe and appropriate use and disposal of hazardous substances based on a full assessment of risks to human health and the environment. To accelerate work on reducing the use and emission of hazardous substances that are toxic, persistent and bioaccumulative with the ultimate aim of phasing out those uses which cannot be adequately controlled, and by 1992, agree on regional timetables for such phasing out. Disposal at sea, whether by dumping or incineration of wastes, should not be allowed, unless such disposal poses no threat to the marine environment, in accordance with the provisions of the London Dumping Convention.

(d) To ratify as soon as possible the Basel Convention on the control of the transboundary movements of hazardous wastes and their disposal. This would constitute an important step towards reducing the generation of such wastes and ensure their disposal in an environmentally sound way.

(e) To stimulate transfer of environmentally sound technologies, particularly to East European and developing countries and to support the efforts of those countries to create and develop appropriate indigenous capacities. International organizations concerned should explore effective modalities, including funding mechanisms, to assure access to such technologies while ensuring the protection of proprietary rights.

(f) To encourage investors to apply environmental analysis procedures and the environmental standards required in their home country to investments abroad. We

encourage UNEP, UNIDO, UNDP, IBRD, ILO and appropriate international organizations to support their member countries, in particular developing countries, in establishing legislation, requirements and administrative systems for ensuring environmentally sound industrial investments. Industry and government should co-operate in establishing guidance for this purpose.

(g) To strengthen co-operation on the prevention and control of transboundary impacts of industrial accidents. In particular, to aim for a rapid elaboration of the ECE legal instrument on transboundary impacts of industrial accidents. To urge Governments and international organizations to render assistance in overcoming the consequences of industrial accidents, especially those with transboundary effects such as the accident at Chernobyl nuclear power station. The proposal for a centre on emergency environmental assistance and identification of possible gaps in existing response networks should be taken into account in this work, as should relevant activities undertaken within other international organizations.

(h) To strengthen co-operation with industry through mutual consultation with regard to the development of environmental policies and encouraging industry to report annually on their environmental records, including information on the efficiency of the use of energy and raw materials.

(i) To encourage constructive and effective co-operation between Governments, industry and labour in order to protect and improve safety and health conditions at the workplace in the light of the close link that exists between the general environment and the working environment.

(j) To strengthen sustainability in every sector of production, including forestry, agriculture and fisheries. Initiatives for sustainable development in these sectors are required for all ECE countries. This should be undertaken through appropriate plans at regional and national levels, and initiatives at the global level should be supported. The ECE countries should fully support the UNEP/FAO conference in 1991 in order to achieve substantial progress ahead of the global conference on environment and development in 1992.

V. AWARENESS RAISING AND PUBLIC PARTICIPATION

16. Emphasizing the importance of participation by a well-informed and well-educated society so as to allow the public to mobilize itself to effect political change consistent with sustainable development. The Bergen process is an important step forward in optimizing democratic decision-making related to environment and development issues.

(a) To promote environmental education, including non-formal education, for all ages and sectors of society. This could be achieved, inter alia, by adapting school curricula and educational material on sustainable development and by designing education and training programmes that enable students, workers, businessmen and decision makers to appreciate the connection between their specialisms and environmental issues. To integrate and use environmental knowledge in all sectors of society.

(b) To reaffirm the special role of women in promoting sustainable development and to improve their economic and educational opportunities, especially in developing countries.

(c) To stimulate national and international exchanges of environmental information and foster scientific and technological co-operation in order to achieve sustainable development.

(d) To encourage the use of schemes for informing the consumer of the environmental qualities and of the risks of industrial products from "cradle to grave". Such schemes could include environmental labelling, logos, product declarations and process declarations based on up-to-date and improved methods of analysis.

(e) To develop further national and international systems of periodic reporting of the state of the environment and to encourage open debate on the environmental implications of national policies.

(f) To undertake the prior assessment and public reporting of the environmental impact of projects which are likely to have a significant effect on the human health and the environment and, so far as practicable, of the policies, programmes and plans which underlie such projects and to ensure that East European and developing countries are assisted through bilateral and multilateral channels in evaluating the environmental impact and sustainability of their own development projects. To develop or expand procedures to assess the risks and potential environmental impacts of products.

(g) To reaffirm and build on the CSCE conclusions regarding the rights of individuals, groups and organizations concerned with environmental issues, and in addition to safeguard the rights of individuals and concerned groups to have access to all relevant information and to be consulted and participate in the planning and decision-making concerning activities which may affect health and environment with reasonable access to appropriate legal or administrative remedies and redress. In this connection to contribute to the preparation of a document on environmental rights and obligations for possible adoption at the 1992 Conference on Environment and Development, drawing on all relevant texts available.

(h) To develop rules for free and open access to information on the environment. Such rules can increase public participation in the procedures to control pollution and prevent damage to the environment.

(i) To ensure that members of the public are kept informed and that every effort is extended to consult them and to facilitate their participation in the decision-making process on plans to prevent industrial and technological hazards in areas where they live or work.

(j) To increase co-operation among representatives of government, international organizations and all sectors of society, including the Bergen partners, on developing and implementing national and international strategies for achieving sustainable development.

VI. THE FOLLOW-UP PROCESS

17. We, the Governments and the European Community participating in this Conference, agree to continue our efforts towards reconciling our different needs so that we can work towards sustainable development not only within the ECE region but also globally, with due attention to the needs of developing countries.

18. We recognize that the different levels of economic and technological development among the ECE countries are an obstacle to progress within the region. Therefore it is of crucial importance to accelerate the ongoing process on closer economic and environmental co-operation, taking into account the need for more differentiated commitments. Means to this end should include proper financing and promoting transfer of environmentally sound technology, while ensuring that assistance to East Europe for environmental purposes does not reduce our aid to developing countries.

19. We will promote active and close co-operation between the ECE and relevant multilateral organizations and institutions and between the Governments of the ECE region on the most effective forms of future co-operation on sustainable development.

20. We invite the OECD and the ECE to strengthen their co-operation in relation to regional environmental policies, including the possibility for suitable policy reviews and, where it is appropriate, on follow-up to international commitments. We welcome the decision of the European Communities to establish an Environment Agency and a European Environment Information and Observation Network, charged with the collection of objective, reliable and comparable information at the European level to assist in the effective implementation of environmental policies, and to inform the public on the state of the European environment. We also welcome the decision that participation in this Agency should be open on mutually acceptable terms to other countries of the ECE region. We invite UNEP, WMO, ECE and the OECD to co-operate actively in the work of the Agency.

21. We recommend the establishment or continued use of round tables or committees or comparable processes to promote the integration of environmental considerations in all economic and social activities and thereby contribute [illegible] sustainable development with a view to improving the accountability of all participants in decision-making. Such bodies should take account of the Bergen model.

22. We will continue to improve national and international processes within the ECE region in the light of the important multisectoral dialogue among Governments and non-government sectors which was initiated by the Bergen process.

23. We will aim for the early completion, if possible in 1991, of the ECE Convention on environmental impact assessment in a transboundary context and to promote the further development of international environmental law.

24. We call on those ECE members who have not already done so to ratify or accede to the Montreal Protocol. We also call on the meeting of the Parties to the Montreal Protocol in London in June 1990 to strengthen international action to

protect the ozone layer including, for example, through additional resources and technology transfer. It will be necessary to contribute to the fulfilment of the financial and other conditions to be agreed by the Parties to encourage a broader participation in the Protocol. In the ECE region we are prepared to do so.

25. We will consider strengthening international programmes, existing institutions and law leading up to the 1992 United Nations Conference on the Environment and Development, taking into account, inter alia, the conclusions of the Siena forum on international environmental law.

26. We recognize the need to evaluate progress in the follow-up to the Bergen Conference and in the outcome for our region of the 1992 Conference and recommend the convening of a high-level meeting of countries in the ECE region, in full co-operation with non-governmental organizations and with the ECE.

27. We invite the ECE to prepare a report on the Bergen Conference as a contribution to the 1992 Conference on Environment and Development.

28. We urge Governments and others concerned to contribute generously to the voluntary fund established for the purpose of assisting developing countries, in particular the least developed among them, to participate fully and effectively in the 1992 Conference and in its preparatory process.

29. We strongly recommend that the experience gained in the preparation and conduct of the Bergen Conference with respect to the full involvement of non-governmental organizations, be used by other Regional Commissions of the United Nations and by the Preparatory Committee of the 1992 Conference on Environment and Development and, in this regard, welcome the organization of an NGO meeting to be held in Paris in 1991, in order to prepare for their participation at the 1992 Conference.

Annex II

JOINT AGENDA FOR ACTION: BERGEN CONFERENCE

INTRODUCTION

1. The collaborative participation of Governments and five non-governmental organizations (NGOs) has greatly enriched the preparations for the Bergen Conference. The non-governmental organizations have held their own conferences and in the four workshops they worked closely with government representatives to draw up a wide range of innovative proposals.

2. During the discussions and consultations, a variety of policy and action proposals were identified which, in the opinion of participants, warrant study, elaboration or further action. These ideas have been collected in the following Joint Agenda for Action.

3. While not pre-judging the final view of any of the participants, the Joint Agenda for Action represents a common view of representatives of Governments, business, voluntary environmental organizations, youth, science and labour on proposals to promote sustainable development which merit discussion, consideration or decisions by the various partners in the Bergen Process, either jointly or separately.

4. The Governments and five non-governmental organizations will prepare in co-operation with the ECE a progress report on the implementation of the Joint Agenda for Action by the 1992 Conference on Environment and Development. This proposal is made recognizing many decisions have yet to be made on the 1992 Conference.

AWARENESS RAISING AND PUBLIC PARTICIPATION

5. The World Commission pointed out that the science community, voluntary environmental organizations and youth play pivotal roles in increasing environmental awareness. Science provides evidence of environmental degradation resulting from human activities while voluntary environmental organizations, trade unions, youth and other community groups raise public awareness and with it political action. It will take even greater efforts to inform and gain support of all sectors of society at the national and international level to make sustainable development the basis for tomorrow's equitable growth.

(a) Participation by all sectors of society in implementing policies for sustainable development is vitally important. Women's involvement with the management of environment and development makes it essential that they be involved in all levels of decision-making. Participation should be facilitated through public awareness of and access to information about the state of the environment and future environmental conditions, commitment to the public right to know, and public participation in the decision-making process. This includes contributing to Governments and other decision makers and decision makers taking note of those contributions.

(b) The public must participate in decision-making and implementation processes concerning environment and development because of their importance today and in the future. Consultation and co-operaton should be increased among all sectors of society in developing and implementing national strategies which support sustainable development, consistent with different cultures and political systems. One example of a means of achieving multipartite consultation is the work of the Canadian National Task Force on Environment and Economy, which led to Round Tables on Environment and Economy at the national and provincial levels.

In addition new processes should be designed at the local level, incorporating traditional knowledge, cultural and community values. These processes must be open, inclusive and participatory in order to involve the greatest number of people possible, with special emphasis on women's participation. Since culture and cultural heritage of all sorts, (monuments, language, customs) are also part of the human environment, all due care and attention should be taken for their protection and preservation.

In the same context, the Bergen Process can be considered as a first step towards future international decision-making processes related to sustainable development, especially on follow-up of the report by the World Commission on Environment and Development and in preparation for the 1992 Conference on Environment and Development.

(c) All sectors of society have a responsibility for environmental awareness. They should be encouraged to keep their constituencies and the public well informed on sustainable development issues in a responsible manner. This should avoid being unduly alarming and underestimating environmental risks. This can partially be accomplished by establishing appropriate forums for dialogue with the scientific community and by publishing scientific results in comprehensible terms.

The scientific community has a compelling obligation both to provide the best possible information and to explain clearly the nature of scientific knowledge and the certainty of uncertainty. Scientists have an obligation to share research and knowledge across national borders and for all policy makers. Scientists must be allowed to research and publish results irrespective of the consequences of their predictions and analyses. Scientists have a duty to listen to the fears and expectations of the public and to incorporate these into their research. Scientists should foster national and international exchanges of scientific information about the environment and international scientific collaboration to achieve sustainable development.

(d) Government and non-government, natural and social science and engineering institutions should be supported and strengthened for the purpose of gathering and analysing environmental data, and increasing research and development capabilities. International monitoring of these efforts, combined with greater co-operation and transfer of knowledge and technology, is essential and should be supported by practical means in all ECE countries.

(e) The use of environmental impact assessments should be expanded and strengthened to consider the likely impacts and risks of policies, projects, or facilities that may adversely affect health or environment. Procedures should be developed or expanded which assess potential environment or health impacts of products. The public must have access to pertinent information.

The public must also have an opportunity to participate in the decision-making process with reasonable access to appropriate legal remedies and redress. Assistance should be given, especially at the community level, to enable the public to participate meaningfully in such processes. These principles should apply to development projects within the ECE region as well as in developing countries.

Industry, labour, local authorities and emergency services should consult on and regularly review emergency procedures such as those included in the recommendations of the United Nations Environment Programme and the Emergency Preparedness at Local Level initiative.

Further work on methodological development and harmonization of environmental statistics should be developed for the ECE region. Periodic examination, critical review and reporting of the state of the environment and environmental policies in all member countries should be considered.

Further action needs to be taken to put into practice the conclusions of the 1989 Sofia Conference on Security and Co-operation in Europe (CSCE) regarding the respect that should be accorded to the rights of individuals, groups and organizations concerned with environmental issues. These conclusions cover free expression of views; the right to associate with others; peaceful assembly; the right to obtain, publicize and distribute information without legal and administrative impediments; participation in public debates; and establishing direct and independent contacts at national and international levels. In addition it is important to establish and safeguard rights of participation in decision-making processes.

These rights should be elaborated in a document for the 1992 Conference on Environment and Development. The countries of the ECE region, in consultation with the partners of the Bergen Process, could assist the Preparatory Committee for the 1992 Conference with the preparation of any such document. The document could draw, inter alia, on the Stockholm Declaration of 1972, the Conclusions of the CSCE, the World Health Organization Charter on Environment and Health and the document prepared by a drafting group, hosted by the Dutch Government in February 1990, at the request of the Bergen secretariat.

(f) Educational institutions should be encouraged to adapt their curricula to include environmental protection and sustainable use of natural resources as an integral part of all levels of education.

Interdisciplinary scientific training programmes should be established.

Nonformal learning, such as nature awareness experiences, adult education and cross-cultural programmes, and other active involvement of people in the processes

and decisions affecting their lives and environments is equally important. Extending opportunities for such learning should be a major priority for all non-governmental sectors and should attract government support. Special attention should be given to on-the-job training.

(g) At the regional, national and subregional level, the countries of the ECE region should work to develop and improve schemes for informing consumers of the environmental qualities of products over their lifecycle, thereby helping them choose environmentally sound products and lifestyles. Such schemes could include standardized environmental labelling and logos. The purchasing practices of all sectors of society should be encouraged to favour environmentally sound products and services.

Public knowledge about and attitudes towards the environment should be monitored periodically through surveys.

Data on natural resources and sustainable development should form a common basis for environmental actions, and be used as input in research, national income acounts, and economic and physical planning. This should be made available through a network of resource centres and data banks such as the European Environmental Agency.

Governments should strengthen their activity in the transfer of environmental information and expertise from the more experienced to interested countries within the ECE region and to developing countries. One example is the Regional Environmental Centre for Central and Eastern Europe is being established in Budapest.

THE ECONOMICS OF SUSTAINABLE DEVELOPMENT

6. The World Commission stated that:

> "Two conditions must be satisfied before international economic exchanges can become beneficial for all involved. The sustainability of ecosystems on which the global economy depends must be guaranteed. And the economic partners must be satisfied that the exchange is equitable; relationships that are unequal and based on dominance of one kind or another are not a sound and durable basis for interdependence."

We endorse these conditions as fundamental principles of sustainable economic activity, especially emphasizing that economic development and protection of all global ecological systems must be made compatible.

Future economic development should not be based on increases in consumption of energy and raw materials, but instead must stress greater efficiency and reduced inputs. ECE Governments should give high priority to reducing excess consumption and waste in their own societies in order to achieve sustainable development. To reduce environmental degradation, ECE countries should work with countries experiencing rapid population growth to assist them in implementing their population policies, particularly by meeting the basic human needs of impoverished peoples.

(a) All sectors of society should be encouraged to participate in formulating policies for sustainable development. The aim should be to integrate environmental and economic decision-making so that future generations are provided with natural resources, knowledge, skills and man-made physical capital enabling them to fulfil their needs.

(b) At present, environmental goods are underpriced and even considered as free goods. This has in many cases led to over exploitation. Economic instruments should therefore be used more extensively in the policy mix to contribute to the improvement of the quality of life, to motivate consumers and producers to face the environmental consequences of their choices, and to ensure structural adjustments. This, together with other economic incentives, should encourage investment in the design of products and industrial processes that are energy and resource efficient, that enable and require recyling, and that reduce waste and the generation of garbage and pollutants.

The "polluter pays principle" should be implemented to provide correct market signals. The use of some scarce natural resources is currently subsidized by Governments. A "user pays principle" should instead be considered in such areas, provided that there are no overriding social or economic considerations.

The ECE countries should study the effects of the extensive use of environmental taxes.

Established frameworks of laws and enforced environmental regulations are the basic preconditions for the use of economic instruments.

Impacts on relative competitive conditions should be dealt with through a co-ordinated approach. To avoid economic and competitive distortions, ECE countries should adopt a co-ordinated approach in developing economic instruments.

(c) Efforts to supplement current national income accounting systems to reflect the importance of natural resources as depletable or renewable economic assets are laudable, but should be tempered by an awareness that it is not possible to translate all environmental values into monetary terms. Therefore, we should encourage development of internationally compatible environmental indicators. Methodologies should be developed for calculating both the benefits and costs when estimating various environmental protection programmes.

(d) Studies should be undertaken to review the extent to which existing or emerging patterns of natural resource property rights create or reinforce obstacles to greater efficiency, equity and sustainability in resource use.

(e) Multilateral development banks need to consider effective financial mechanisms that promote sustainable development. These approaches should pay specific attention to the conservation of critical ecosystems in developing countries. ECE member States and non-governmental organizations should stimulate discussions to define a frame of reference and appropriate mechanisms for addressing these needs. In addition, funding mechanisms should address priority global problems, such as greenhouse gas build-up, ozone depletion, threats to global commons or loss of biological diversity, their consequences or causes.

The multilateral development banks, including the newly-established European Bank for Reconstruction and Development, should ensure that the concept of sustainable development is an integral component of their policies, programmes and projects. In particular, the banks should ensure full consideration of the environmental and resource implications of their lending operations.

(f) Given the increasing significance of environmental considerations in policy-making, international trade discussions should give full consideration to environmental, social, and economic objectives.

GATT and other trade agreements should ensure the right of all countries to protect their environment and conserve natural resources within the discipline of the GATT rules. International forums such as OECD, ECE, UNCTAD and GATT should consider the interlinkages between environmental and trade policies.

Mechanisms must be developed to ensure control of the international trade in toxics, such as pesticides (meaning, in general, all forms of agricultural biocide), whose use has been banned or severely restricted in the country of export.

Economic instruments, including bilateral and multilateral trade agreements, should, in so far as practicable, be structured so as to avoid undesirable environmental effects resulting from international trade. In addition to trade distortions, there is a need to scrutinize environmental effects of other market distortions, such as tax exemptions and subsidies in order to and or modify practices that are not environmentally desirable.

(g) Third world debt is a major obstacle to sustainable development. ECE Governments should continue to search for new and creative means of easing developing countries' debt service burden. ECE donor Governments should make every effort to allocate at least their committed target of 0.7 per cent of their GNP to sustainable development programmes.

Governments and relevant international organizations are encouraged to find innovative solutions to the environmental challenges of Eastern and Southern Europe as well as of developing countries. They could facilitate the flow of capital and technology in support of environmental protection efforts of the receiving countries.

Moreover, the multilateral banks should address the needs of Eastern European countries to implement sound natural resource management, especially focusing on technology transfer.

In view of the degradation of the environment as a result of mass tourism in the Mediterranean basin, studies of the impact of such developments should be undertaken. New forms of more environmentally sensitive tourism should be encouraged.

(h) Projects focusing on human resources, institutions, and popular participation, in particular the potential contributions of local communities, non-governmental agencies and the private sector should be encouraged. In

addition, the particular contribution of women should be emphasized. With respect to realizing these goals, economic and educational opportunities for women must be strengthened in all nations.

(i) Countries possessing rich biological diversity need to receive the economic benefits from this diversity so as to provide stronger motivation for conservation. Co-ordinated measures, agreed with tropical countries and with adequate funding are essential. In order to halt deforestation and to aim at an increase in forested land international organizations, multilateral development banks and bilateral aid agencies should be encouraged to expand their forest sector support programmes in developing countries. They should stress providing assistance for setting aside forest lands in protected areas, reforestation projects, sustainable management of natural forests, and establishment of secondary forest products and industries for the benefit of local communities.

(j) In view of the major economic challenges involved in the revisions of existing international agreements and the work aiming at new agreements, efforts should be made to encourage cost-efficiency, taking into account both marginal abatement cost and critical loads within and between countries.

(k) It is hoped that the relaxing of military tensions in Europe will provide conditions for expanded expenditures in waste cleanups and investment in sustainable development.

(l) Governments and non-governmental agencies should increase their efforts to act as "green consumers" by seeking to purchase more recycling and environmentally friendly products in the market place.

(m) ECE Governments and non-governmental organizations should agree to maintain and expand support for studies into the science and economics of global change and environmental sustainability.

SUSTAINABLE ENERGY USE

7. The World Commission on Environment and Development concluded that energy conservation and increased use of renewable energy is the only viable way forward. A low energy path would help conserve the traditional fuels needed for the developing countries. However, these countries should be assisted gradually to use new technologies and renewable energies as a substitute for traditional ones.

To quote the WCED report:

> "A safe, environmentally sound, and economically viable energy pathway that will sustain human progress into the distant future is clearly imperative. It is also possible."

The WCED report concluded:

> "Within the next 50 years, nations have the opportunity to produce the same levels of energy services with as little as half the primary supply currently consumed."

(a) Energy efficiency and conservation must lie at the heart of a sustainable energy strategy. All sectors of society are encouraged to play their part in developing and using energy efficient, environmentally sound techniques and management practices, and in strengthening programmes for energy conservation. Taking into account that substantial savings can be achieved in the residential and commercial sectors, high energy efficiency standards of buildings, including energy utilizing equipment and systems should be achieved by public and private entities alike.

(b) The United Nations ECE should be invited to prepare an Environmental Assessment, notably in Central and Eastern European countries, with regard to the relationship between economic activity and energy use in United Nations ECE countries, in order to outline necessary steps and financial means to achieve parity with best available practices and standards in ECE countries. Each United Nations ECE Government should prepare periodically a statement on energy policy, including particularly proposals for conservation and efficiency.

(c) The need to address climate change has been recognized at many international meetings, including the Noordwijk meeting on climate change. This recognition should lead to a framework convention on climate change. All countries should do their utmost to ensure adoption of the convention as early as 1991 if possible, and not later than at the Conference of the United Nations on Environment and Development in 1992. Therefore all countries are invited to join and strengthen the work of IPCC in order to provide the best possible base for negotiations. Protocols, especially those aimed at reducing energy-related greenhouse gases and protecting forest ecosystems, should be prepared as expeditiously as possible. The formulation of quantitative targets should be based on the best scientific evidence available, including the report of the IPCC. It should also take into account the recommendations of the Toronto Conference (initial global reduction of CO_2 of 20 per cent by 2005, with an estimated reduction of more than 50 per cent required to stabilize the atmospheric concentration of CO_2); the declaration made by Environment Ministers at Noordwijk (stabilization of CO_2 emissions as soon as possible, in the view of many nations by the year 2000 at the latest); the results of the Science Conference in Bergen (stabilization of atmospheric concentrations, not simply stabilization of emissions), and other meetings. Some countries have adopted, as a preliminary target, the stabilization of CO_2 emissions at present levels by the year 2000, and invite other countries to follow suit.

(d) We welcome particularly the IPCC workshop to be held in London, which will discuss, in fulfilment of the remit of the Noordwijk declaration, the feasibility of achieving targets to limit or reduce CO_2 and other energy-related greenhouse gas emissions, and the technical and methodological issues involved in setting such targets. With respect to the differences between nations and regions, the economic impacts of implementing these proposals must be evaluated. One promising approach in formulating national commitments seems to be to consider a trade-off in reduction targets between different greenhouse gases and the sustainable use of the biotic carbon reservoirs. United Nations ECE Governments should work in the context of the framework convention to include the examination of possible mechanisms for achieving agreed targets for CO_2 emissions and other

greenhouse gases, taking into consideration equatability, financial means, and the different needs and abilities of all countries, especially developing countries. This would include an examination of the alternative bases on which targets could be administered, whether global, per country or per capita.

(e) Some policies are justified in their own right and should be pursued. All countries of the ECE region should pursue actions to phase-out CFCs; vigorously promote energy efficiency; encourage shifts to less polluting energy sources such as natural gas and renewable sources; and give high priority to promoting ecologically sound net forest growth. Funds for research, development and demonstration need to be increased and existing barriers for market penetration of energy efficient, renewable energy and clean life cycle technology must be removed.

(f) All ECE countries should work towards the reduction of SO_2 and NO_x emissions and other transboundary air pollutants to ensure that local and regional critical loads are not exceeded.

(g) Taking into account that transport is a major cause of local pollution, regional acidification and global atmospheric pollution; the contribution of transport to environmental degradation in the ECE countries should be reduced. There should be a shift in investment from road to rail traffic with emphasis on the development of the rail freight network and fast passenger trains. Lower maximum speed limits should be considered, along with traffic-free urban areas, bicycle paths and bans on idling. More balanced transportation plans should be prepared, giving greater weight to bicycles and public transport as a means of reducing urban congestion, air pollution and fossil fuel use. Health hazards and emissions should be reduced by promoting the use of lead-free gasoline, catalytic converters, and low pollution energy sources as well as controlling emissions from vehicles, bulk terminals and service stations. New cars, buses and trucks should use the best available technology for the reduction of emissions and fuel efficiency. Environmental standards for controlling emissions should be considerably reinforced in all ECE countries.

(h) Business should be encouraged to apply energy efficiency targets for production processes and products, establish energy monitoring systems and carefully examine the use of energy mixes in production processes; as well as to take advantage of new financing methods for energy saving investments, including third-party financing. Industry should be expected to adhere to strict environmental standards while providing flexibility on the means to achieve compliance. Individuals should consider the energy and environmental consequences of their daily decisions and seek to minimize their impacts in both regards.

(i) Energy utilities should be encouraged to review their price and tariff systems taking into account long-term marginal costs, time variable costs, and the need for incentives to reduce consumption and promote rational energy use. Governments should seriously consider the removal of subsidies in the energy sector. Transparency in energy pricing is an important principle that should also be seriously considered by Governments. New economic instruments should be devised for all sources of energy in order to make prices fully reflect the environmental costs of production, generation and supply, and the economic, social and regional impacts of those instruments should be evaluated before implementation.

(j) Recognizing the problems associated with nuclear power and the absence, at present, of sufficient, environmentally-safe renewable sources to substitute for it and fossil fuels; and taking into account the environmental advantages and disadvantages of nuclear power; for as long as it is used, the highest safety standards covering both reactors and waste management must be developed and maintained in countries using nuclear power. International co-operation in the safe operation of nuclear generation facilities and nuclear waste management should be strengthened.

(k) To ensure an appropriate level of support for renewable energy technology, institutional arrangements in the United Nations system should be revised, or a new institution established.

(l) Actions should be continued and intensified in order to halt and reverse the deforestation process. Reforestation should be rapidly fostered both for climate and energy reasons.

(m) Efficient energy saving and the rapid reduction of the most serious environmental pollution should be given high priority in the transfer of capital, technologies and development aid. Funding of all energy projects and programmes, including funding from such institutions as the World Bank, the European Investment Bank (EIB) and the new Bank for European Reconstruction and Development (BERD) should be based on the principle of sustainable development.

(n) The transition to a sustainable energy future will require major contributions from science and technology and, correspondingly, major commitments to the development and deployment of new technology by both Governments and private industry. The scientific community should assist policy choice by analysing different technological options and economic and regulatory approaches. Extensive research and development will be needed to realize the full potential of energy technologies including energy efficiency and renewable energy. Major national and multinational programmes on renewable energy development and efficiency improvement possibilities should be established by all ECE countries. These efforts should be pursued in such a way that the benefits of new science and technology are made more widely available in North and South, East and West.

(o) Research and development in the energy sector should be increased. Although today's primary energy sources will be available for a long time to come, the technical evolution process is vital because of the long lead times needed to establish major new energy sources. International co-operation between Governments and corporations is required to develop new advanced energy technologies.

SUSTAINABLE INDUSTRIAL ACTIVITY

8. Industry is and will remain an essential provider for human needs. However, a rapid shift to sustainable forms of industrial development is essential to economic prospects and human survival. This shift should achieve a rational, effective approach to sound resource use, pollution prevention and waste minimization. It should be based on taking precautionary and preventative measures.

The goal for sustainable industrial development should be to achieve clean production (processes and products). Clean production addresses all phases of the life cycle of a product with the objective of prevention and minimization of short- and long-term risks to human health and the environment.

(a) Countries and relevant organizations of the ECE region should further the development of joint strategies for the harmonization of environmental regulations. This should be based on promoting clean production as a priority. Concepts such as best available technologies not entailing excessive cost, critical load, emission quotas and strict omission standards should be made use of, where appropriate, based on scientific foundations recognizing the limitations of science. Measures for the standardization of monitoring and analytical procedures for the abatement of pollution from industrial processes and products should be developed.

Further work should be encouraged on the practicability of these concepts and measures as a means for curtailing emissions.

(b) Environmental policies should be co-ordinated and make use of carefully planned economic instruments to avoid undesirable competitive effects of less stringent environmental requirements in some countries. Industry should be encouraged to apply standards of environmental responsibility to their foreign operations which are as high as that used in their home country, or higher if circumstances warrant.

The International Chamber of Commerce will consider the establishment of environmental guidelines which would discourage industries from relocating to countries with lower environmental standards solely to avoid pollution control.

(c) The ECE should be encouraged to study and elaborate measures promoting the transfer of technology supporting sustainable development including suport to monitor the state of the environment. In addition, the ECE should co-ordinate a network which would facilitate better access to existing technology data banks taking into account the work of relevant international organizations.

(d) Member States of the ECE should be encouraged to review existing procedures to identify possibilities for administrative reforms which could lead to more efficient permitting procedures. Governments should also adopt a longer view and aim for more stability in regulations which would aid long-term business planning.

Mechanisms and consultation and co-operation between management and labour should be strengthened with the view to preventing industrial accidents and hazards, many of which could have adverse impacts on the environment. Also environmental considerations must be included in international standards for products and machinery to protect the environment. As environmental impacts and occupational health and safety issues often are part of the same problem, industry should develop and implement integrated environmental strategies to avoid contradictory measures.

(e) Member countries of the ECE should work towards bilateral and multilateral agreements to exchange environmentally sound and energy efficient technology while providing incentives for business to develop and apply them. This must be linked to training of the recipients in the proper use of the technology. Countries of the ECE region should consider establishing national co-ordinating mechanisms for facilitating such transfers.

(f) Process to establish a global convention for the prevention of marine pollution from industrial sources, based on the relevant principles contained in this section, should be initiated as soon as possible.

By 1992 Governments should have agreed on a regional timetable for the phasing out of all pollution from environmentally damaging substances based on the "black list" of the Paris Convention including such substances as mercury, cadmium and chlorinated organic compounds, the emphasis should be on avoiding the production and use of those substances which cannot be adequately controlled.

(g) New chemical substances should be screened in accordance with already agreed international standards with regard to their environmental impact prior to their introduction on the market. Procedures should be developed or expanded which assess potential environmental or health impacts of products.

(h) The ECE should be encouraged to convene a high-level meeting with the broad participation of business to enhance the co-operation on sustainable development in the chemical and related industries as well as to collaborate with the International Iron and Steel Institute on organizing the World Conference on Environmental Control in the Steel Industry to be held in Dusseldorf in 1991 and ICC on organizing the World Conference on Environmental Management II in Rotterdam in 1991.

(i) Agreements should be developed and implemented to reduce, eliminate or prevent adverse transboundary environmental impacts. The ECE is already undertaking valuable work of this kind in elaborating a Convention on environmental impact assessment in a transboundary content, as well as legal instruments on the transboundary impacts of industrial accidents taking into account a proposal for a centre on emergency environmental assistance.

Member countries of the ECE region and international organizations should promote further development of wide international co-operation in overcoming the consequences of industrial accidents with transboundary effects, taking into account the serious ecological consequences of the accident at the Chernobyl nuclear power station.

(j) Business organizations should be encouraged to inform their members on statutory requirements, exchange experiences and promote improvements in environmental practices beyond those required by law.

(k) Governments should encourage business to use such tools as objectively conducted environmental audits and environmental impact assessments. Audits should be used as a management tool to check that environmental equipment, management

systems and procedures are being properly applied. Business and authorities should work together in preparing guidelines for such activities. In drawing up environmental audits employers should consult workers and their trade union representatives; in particular, information should be provided on those environmental regulations and standards which will affect the pattern of work, or the viability of the plant.

(l) Business should implement the "cradle to grave" approach for potential environmental impacts of their products over their life cycle (product stewardship). Environmental information on their products and processes should be freely available thereby enabling the consumer to make environmentally informed purchasing decisions.

(m) Governments should encourage business municipal authorities and the public to commit themselves to the process of waste minimization and to segregation of wastes for further recycling and to prevent wherever possible the generation of hazardous wastes. The transboundary movement of hazardous and other wastes should be controlled and reduced in accordance with the Basle Convention. Effective and sound management, as well as safe disposal of any residual waste, must be ensured. Industry should design products as easily recyclable. Business should focus on waste prevention methods rather than waste control and disposal methods, recognizing that clean production methods are the best solution to the waste crises.

(n) The use of performance based environmental standards for products and processes should be increased to encourage creativity for meeting the environmental goals at the lowest cost and for the introduction of new cleaner production methods.

(o) Technology transfers should not only cover "technology" as such but also include services, policies, management practices and knowledge. Transfers should be stimulated through bilateral agreements and through ECE co-operation on, inter alia, technology assessment, comprehensive data bases, and mechanisms of financing of transfers.

Higher environmental standards can create jobs but also, in the short term, they can put jobs at risk - a problem which is today quite acute in some parts of the ECE region. This may require a number of policy approaches based on careful preparation including transforming existing plant to clean production financing schemes for environmental restructuring; or workers being provided with adequate time and transitional assistance. Trade unions need to link with employers and local authorities on the local environment and on the health and safety of workers in the community.

Workers, their trade union representatives, and managers should be fully trained in the environmental aspects of their work. Programmes, which are being developed by industry and international organizations including ICC, UNEP and UNCTC should be used as the basis for educational material for management training programmes. Such programmes should train managers to incorporate environmental protection and related worker consultation in their standard management practice.

International organizations, aid agencies and business should explore ways to facilitate access to appropriate technologies having regard to proprietary rights and the possibilities of appropriate funding to enable the least developed countries to obtain clean production technologies.

Reorientation of industrial and agricultural processes and technologies should be accompanied by adequate training and retraining programmes for workers in order to avoid loss of employment or lack of qualified labour resulting from these changes.

(p) Developing countries should be assisted in meeting the obligations of existing and future international agreements on global environmental problems. Such assistance could include having technology assessment centres in industrialized countries give attention to their requests and needs. Such assistance and transfers should give priority to clean production methods.

(q) As a part of their wider institution building efforts, Governments, relevant international organizations, business and the scientific community are encouraged to support existing and new centres in less developed countries to gather and disseminate information on cleaner technology, to research and develop locally appropriate technologies, and where fitting, to provide assistance including training of counterpart organizations.

ECE countries must initiate a broad-based planning process that takes into account the expected growth in the transport industry while maintaining its environmental sustainability.

(r) Support from Governments and industry should substantially increase environmental research and development with emphasis on reduction in the use and emission of hazardous substances that are toxic, persistent, and bioaccumulative, with the ultimate aim of minimizing risks to human health and the environment.